

The
BREN GUN
POCKET BOOK
AND ILLUSTRATED GUIDE



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THE BREN GUN

Parts and their Functions

FLASH ELIMINATOR—a cone-shaped extension at the muzzle of the barrel. Certain models of the Bren have a series of holes bored around the eliminator.

FORESIGHT—"blade" pattern, fitted into a stool formed "offset" to the left of the barrel axis. The stool includes two "flared" foresight protectors.

GAS BLOCK—an assembly fitted to the barrel and enclosing the Gas Vent. It contains the Gas Regulator and has a Gas Passage projecting rearwards.

GAS REGULATOR—a shaped and drilled component which seats in the Gas Block. Varying sized Gas Ports are drilled through the regulator. It is shaped to receive the Cylinder Locking Bar or Combination Tool and carries four punch marks, the sizes of which are indicative of the Gas Ports they represent. A Zero Mark is also punched on the Gas Block to which the Gas Ports marks register. On the other face of the Gas Regulator is an adjusting bar fitted with a Retainer Pin, which secures the Gas Regulator in the Gas Block.

CARRYING HANDLE—a rotatable metal arm fitted with a wooden handle is attached to the barrel. By pulling the wooden handle to the rear, it can be moved to a fixed position by a slight forward movement. This is done when using the gun for anti-aircraft purposes, providing a forward support for the gunner's left hand.

BARREL LOCKING THREADS—a series of interrupted square threads are formed around the barrel near the breech, which lock the barrel to the Barrel Nut, when the barrel is rotated by means of the carrying handle. A reverse movement by the same agency unlocks the barrel threads.

BARREL—each Bren gun barrel carries the above components ready assembled. In addition, on the under side is shaped a portion to engage on the top of the Body, and clearances are formed at the breech for the Feed Piece and the Extractor.

BARREL NUT—a circular component which links the barrel to the body. It seats in a recess in the body, being retained in its position by a Retainer Plunger. The Nut is fitted with an external arm containing the Barrel Nut Catch, by means of which the rotation of the Nut is controlled. The engagement of the Catch with the Body prevents the Nut from moving. Internally, the Nut is formed with square threads to engage with those on the barrel. On its lower side the Nut has a Safety Lug which prevents incorrect assembly of other gun components. The Nut is removed from the Body by depressing the Retainer Plunger after the Barrel has been removed from the gun. To remove the Barrel, the Barrel Nut Catch is released and the Nut rotated to its full extent. The Nut to be in the same position when replacing the Barrel.

MAGAZINE OPENING COVER—a ridged and shaped sliding plate which covers the opening in the top of the body into which the magazine is inserted to load the gun. The cover prevents the entry of dirt, etc., into the body when the magazine is off the gun. It is opened easily by a forward pushing movement with the thumb of one hand on the ridged portion.

MAGAZINE CATCH—a shaped upright catch on the top of the body in rear of the magazine opening. It engages with the rear face of the magazine and retains it in position on the gun. It is released by a slight forward push with the palm of one hand, the fingers and thumb simultaneously removing the magazine.

BACKSIGHT—consisting of a Drum, fitted with a sight arm on which is formed an Aperture Sight and Stop. The Drum is circular and grooved to facilitate handling. A window is cut on its rear face to enable range figures to be seen. The range scale is graduated from 200 to 2,000. The Drum gives alterations of 50 yards, each being indicated by a "click". Movement of the Drum affects the sight arm and Aperture. When not in use the Stop must be in contact with the top of the body.

BODY LOCKING PIN—fitted with shaped ends. Connects the body and butt groups. To disconnect them, the pin is pushed to the right. It cannot be entirely removed from the gun except by an armourer.

BUTT—normal wooden type. On its rear upper surface is attached a movable Butt Strap which, when moved over to the rear, assists the firer to control the gun whilst firing. A metal Butt Plate is attached which covers the Butt and controls a Buffer Spring enclosed in the butt. A Catch for the Butt

Plate is fitted to the top of the butt. A longitudinal recess bored through the Butt houses a spiral Return Spring. This spring is attached to and operates a steel Return Spring Rod, which projects through the forward face of the butt. The Butt is fitted into a metal holder at its forward end. This portion also contains a buffering device. A housing is formed under the Butt to receive the Butt Handle (for firing from the shoulder) or the Rear Mounting (when the gun is fired from the tripod). A Mounting Pin secures the connection in either case. The Pin has a shaped handle and is not removable from the butt except for repair. A Butt Swivel is attached to the right side of the butt to which a Sling is fitted.

BUTT SLIDE—a shaped metal extension attached to the forward end of the Butt, forming the underside of the gun assembly. At its forward end it has a housing for a Mounting Pin, which is used to secure the gun to the Tripod (when used). Guide Ribs are formed on the Slide to engage with the Body. An Ejection Opening Cover is fitted into the bottom of the Slide and operated by a milled Catch. This Cover prevents the entry of dirt, etc., into the body and is kept drawn to the rear when the gun is not in use. The firing of the first round automatically opens the Cover. A Trigger Guard and Pistol Grip are formed. The firing mechanism is contained inside the Slide, consisting of a Trigger, Tripping Lever, Sear, Sear Spring, and Pins. A Change Lever operates in connection with the above assembly. The finger piece of the Change Lever projects through the left side of the Slide. The letters "S", "A", and "R" engraved on the slide, indicate the positions for the Change Lever to produce "Safety", "Automatic fire", or "Rounds (single shots)" respectively.

BODY—slides on to the Butt Slide and is secured to that assembly by the Body Locking Pin. It is bored, etc., to accommodate the Piston, Breech Block, etc. At its forward end is a projection, the Gas Cylinder Locking Bar, which seats in a recess formed in the Gas Regulator. In rear of this projection Gas Fouling Holes are drilled in the Body. A Gas Shield is formed in rear of these Holes to prevent the "blown-off" hard fouling affecting the firer. A Gas Cylinder is formed inside the Body in rear of the Shield and Gas escape Holes are bored in the body. An Ejector is housed in the magazine way. It consists of a steel finger fixed under the Magazine Catch. On the right side of the Body is accommodated a folding Cocking Handle, working in a Slide. The Cocking Handle connects with a projecting Pin on the Piston. After cocking the gun the Handle is returned to its forward position and folded forward against the Body side. It does not move during the firing of the gun. The Body is supported at its forward end by the Sleeve of the Bipod.

BIPOD—consists of a circular Sleeve to receive the forward portion of the body, a Bracket and two extending legs. A Swivel is attached to the Bracket for attachment of a Sling (in conjunction with that on the Butt). A Catch and Spring are housed under the Bracket, enabling the legs to be held closed up under the Body when necessary. The Legs consist each of an Upper and Lower Leg, the latter have steps formed on their surface and Shoes formed at their lower extremities. Spring Catches are fitted to the Upper Legs to engage with the steps, thus varying the height of the Bipod.

PISTON—a machined component which operates inside the Body. At its forward end are formed Piston Rings. Guide Ribs are formed along its rear sides to engage with grooves in the Body. In the rear portion of the Piston, an Ejection Slot is cut to allow ejected rounds or cases to pass out of the gun. A shaped Piston Post with Spring is fitted on rear top side to accommodate the Breech Block. The rear of the Piston is shaped for a similar purpose. The rear face has a recess to take the forward end of the Return Spring Rod. A Bent is formed on the under side of the Piston.

BREECH BLOCK—seats on the Piston over the Piston Post. Houses the Extractor, Extractor Spring, Extractor Stay, and Firing Pin. On its upper surface it has two ribs the forward end of which act as a Feed Piece and carry the round forward from the magazine. The groove between the Ribs forms a "way" for the Ejector to operate in. The rear of the breech block is shaped to conform with the rear of the Piston and the appropriate recess in the Body.

TRIPOD—a triangular frame with adjustable legs clamped at each corner. At the front of the frame is a Mounting Pivot to which the forward Mounting Pin of the gun is attached. A Catch is attached nearby for the attachment of a separate leg (or rifle) when the Tripod is used for anti-aircraft purposes. Sling "Ds" are attached to the sides of the frame for carrying purposes. The rear of the frame consists of a graduated traversing arc, marked to 21 degrees either side of centre. Attached to this Arc is the Elevating Gear, consisting of an Elevating Sleeve, Clamp Handle, Elevating Screw, Elevating Nut, Elevating Nut Clamp, Traversing Clamp Handle, and a Rear Mounting. The latter is adjusted to the Butt by means of its Mounting Pin. Rear legs are attached to the frame at the ends of the Arc by Clamping Handles, Clutch Plates, and Springs. Inside each Handle is a Spring Plunger which retains an Anti-aircraft Leg carried inside the hollow side tubes. The anti-aircraft Legs can be withdrawn by releasing each Plunger, the two portions fitted together and the appropriate end engaged with the Catch at the front of the frame, when the Tripod is required for

the Piston when the rearward movement is completed. A pressure on the trigger commences the firing actions again. A separate trigger release being required for each shot.

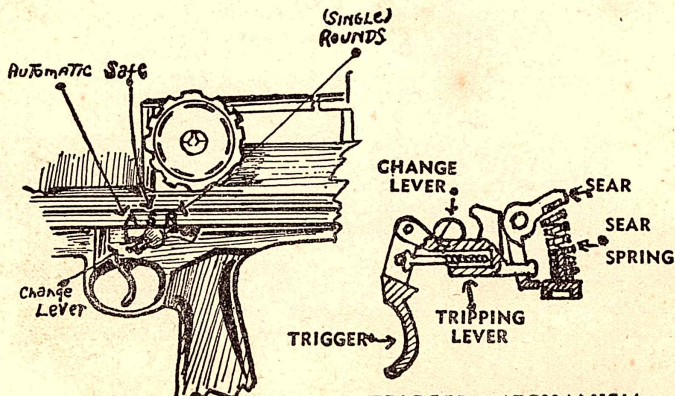
(Change Lever set to "A").

The actions are identical with the above, except that the Tripping Lever does not come into action and the Sear is kept depressed, consequently the Piston, having completed its rearward movement, is pushed forward again by the Return Spring Rod (actuated by the Return Spring) and automatic firing is effected. The gun will continue to fire until either the trigger is released—in which case the Sear is allowed to rise under the influence of its spring and connect with the bent of the Piston, holding it back and the gun cocked, or the ammunition is expended—in which case the magazine platform comes in contact with the Feed Piece and the recoiling portions are held in the rearward position. The removal of the empty magazine and the introduction of a filled one, enables fire to be reopened by a pressure on the trigger. When the empty magazine is removed, the piston and breech block go slightly forward until the Sear connects with the bent (the trigger being released).

Safety Lug on Barrel Nut

Should the barrel nut catch not be engaged correctly against the side of the body, the safety lug on the barrel nut will be in the way of the piston. Should the piston be forward when this happens, the gun cannot be cocked, as the lug will jam against the front of the ejection slot of the piston. If the piston is at the rear, the gun cannot be fired, as the lug will jam again against the piston and prevent it going forward.

NOTE—The Change Lever must not be moved whilst pressure is maintained on the trigger.



anti-aircraft purposes. A forward Leg is attached to the front of the frame in a similar manner to the rear Legs. It is capable of extension, being positioned as required by a Clamping Handle and Catch. The extension portion has "steps" and carries an Anti-aircraft Mounting Socket over which the forward Mounting Pin of the gun fits. Each tripod leg is fitted with a Shoe. An infinite variation in height is possible with the Tripod through the adjustment of the legs. For anti-aircraft purposes, the front leg is set in prolongation of the frame by means of its Clamping Handle. Spring Clips are attached to the inside of one leg of the frame to hold the Butt Handle when the gun is used on the Tripod.

IMMEDIATE ACTION — BREN GUN

(A) If the gun fails to fire or stops whilst firing

Pull back the cocking handle,
Take off the magazine,
Press the trigger,
Put on a magazine,*
Cock the gun by means of the cocking handle,
Aim and fire.

*When the magazine is taken off, examine it to see if it is empty, or

if the top rounds are in correct position, i.e. it is possible through faulty filling to get "rim-behind-rim", thus causing two rounds to come forward at once.

When the rounds are correctly positioned and the magazine reasonably full, it can be replaced on the gun.

(B) If, after doing the above Immediate Action, the gun fires one or two rounds and stops again. (Should not occur with a properly adjusted gun, i.e. correct gas hole used.)

Pull back the cocking handle,
Take off the magazine,
Press the trigger,
Cock the gun by means of the cocking handle,
Remove the barrel and adjust the gas regulator to the next largest hole.
Replace the barrel,
Put on the magazine,
Aim, and fire.

STOPPAGES — BREN GUN

If, after carrying out Immediate Action as in (A) above, the gun will not fire,

Cock the gun,
Remove the magazine,
Examine for any obstruction in the body or the chamber.

Insert

MECHANISM OF THE BREN GUN

(A) Loading

The Magazine Opening Cover is pushed forward. A magazine is placed on the gun by placing the front end in position in the magazine opening, then drawing the rear end of the magazine down to agree. The Cocking Handle is grasped, turned back and then pulled smartly to the rear. It is then pushed forward again and folded forward. When the Cocking Handle is pulled to the rear a projection on its inner surface engages with a projecting Cotter Pin at the rear right side of the Piston, thus withdrawing the Piston and compressing the Return Spring, by forcing the Return Spring Rod rearwards into the Butt recess. The Piston carries back the Breech Block also. As the Piston rides over the Sear it depresses it. The Sear rises again under the influence of its spring and engages against the bent of the Piston, retaining it in its rearward position. The change lever is set as required normally at "S" (safety). In this case the trigger is disconnected from the Sear and the gun cannot fire.

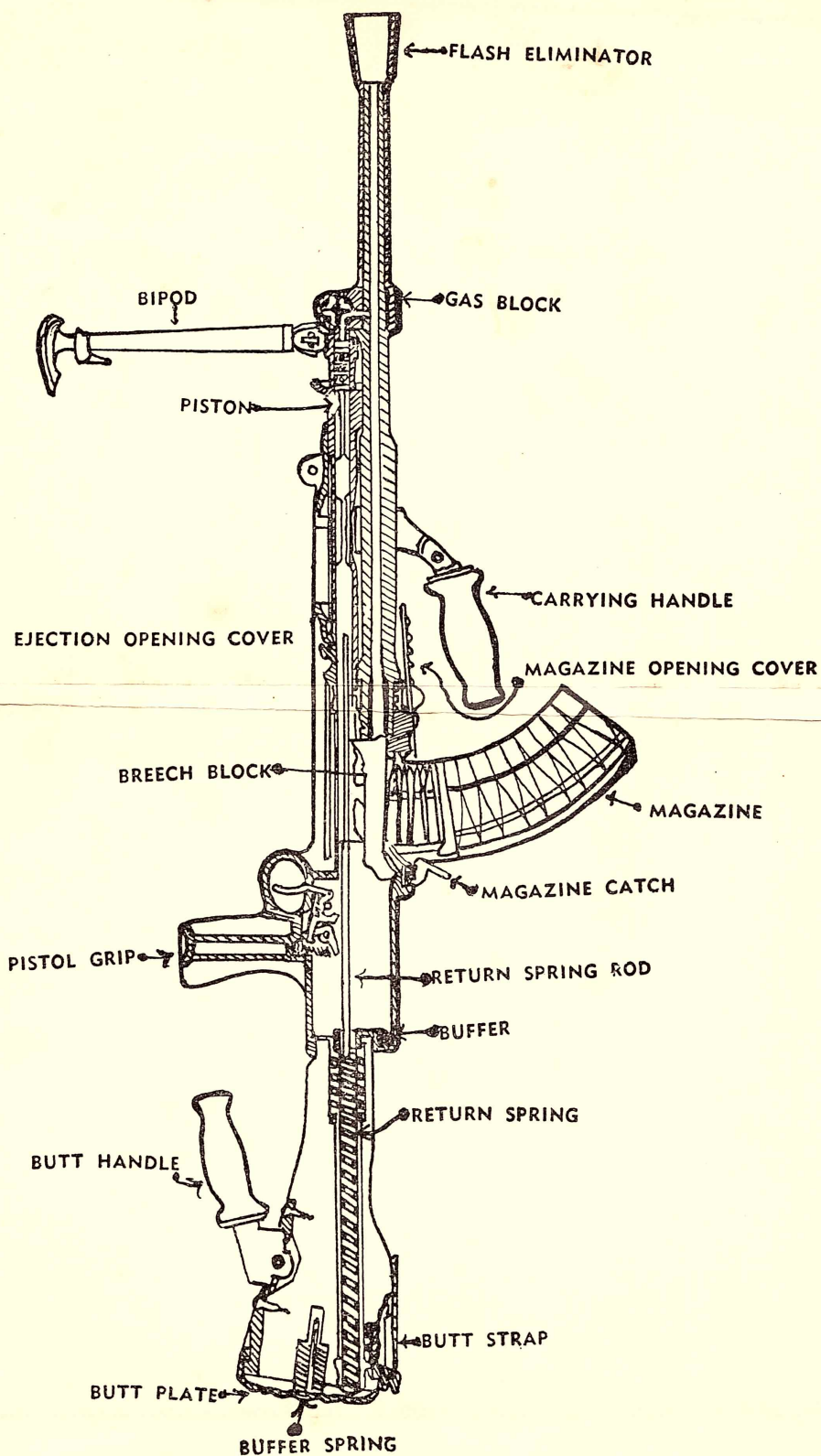
(B) Firing (Change Lever set to "R").

When the trigger is pressed the Sear is depressed, thus releasing the bent of the Piston and allowing the Return Spring Rod (actuated by the Return Spring) to push the Piston forward. Through the action of the Tripping Lever, the Sear is released and rises again ready to connect with bent of the Piston when it again comes to the rear.

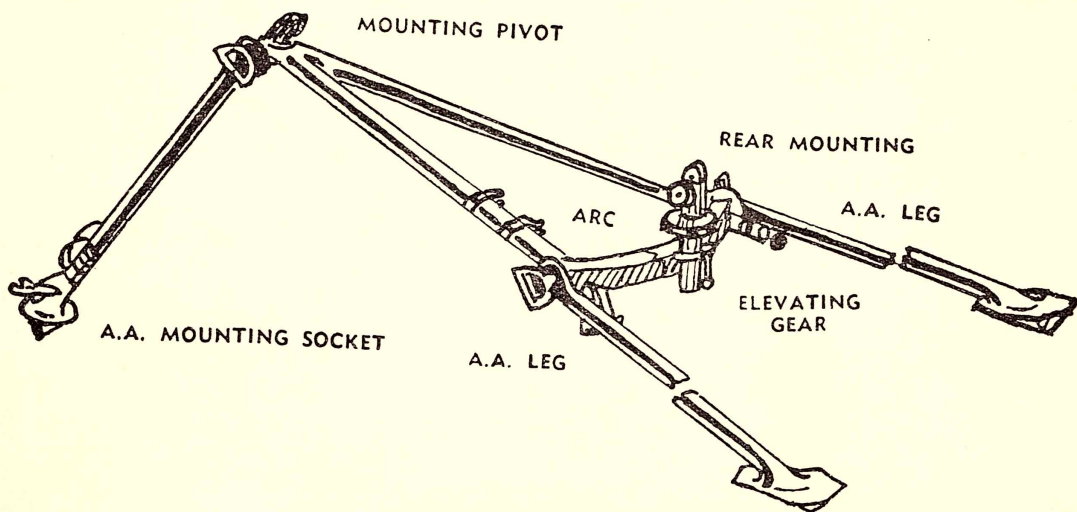
During the forward movement of the Piston, the Ejection Opening Cover (if closed) is caused to move forward, thus clearing the ejection opening.

In moving forward, the Piston carries the Breech Block with it and the Feed Piece on the latter contacts with the first round in the magazine, pushing it forward free of the magazine and into the chamber, the extractor engaging over the rim of the cartridge. Through the action of the Piston Post the Breech Block is seated to take the shock of the explosion. The continued forward movement of the Piston causes the Firing Pin to make contact with the cartridge cap and the round is fired.

As the bullet is passing from the gas vent to the muzzle, a proportion of the explosive gases pass through the gas vent, through the registering gas port in the gas regulator, into the gas passage of the gas block and impinge on the head of the Piston, forcing it to the rear. The firing pin is withdrawn by the action of its spring. The Piston withdraws the Breech Block and compresses the Return Spring. The Extractor withdraws the empty case until it is brought into contact with the Ejector, when the case is deflected downwards through the ejection opening clear of the gun. The Sear having risen as described above, catches the bent of



BREN TRIPOD



(C) **If in the body** (jammed round or empty case),
Remove the obstruction,
Place on magazine,
Aim and fire.

(D) **If no obstruction in body,**

Put the clearing plug into the chamber,
Press the trigger,
Cock the gun,
Remove the clearing plug and obstruction (separated case),
Place on the magazine,
Aim and fire.

CAUSES

Immediate Action—

- (A) i. Empty magazine (no resistance will be felt when pulling the cocking handle back).
- ii. Badly filled magazine.
- iii. Misfire.
- iv. Faulty ejection.
- v. Hard extraction.

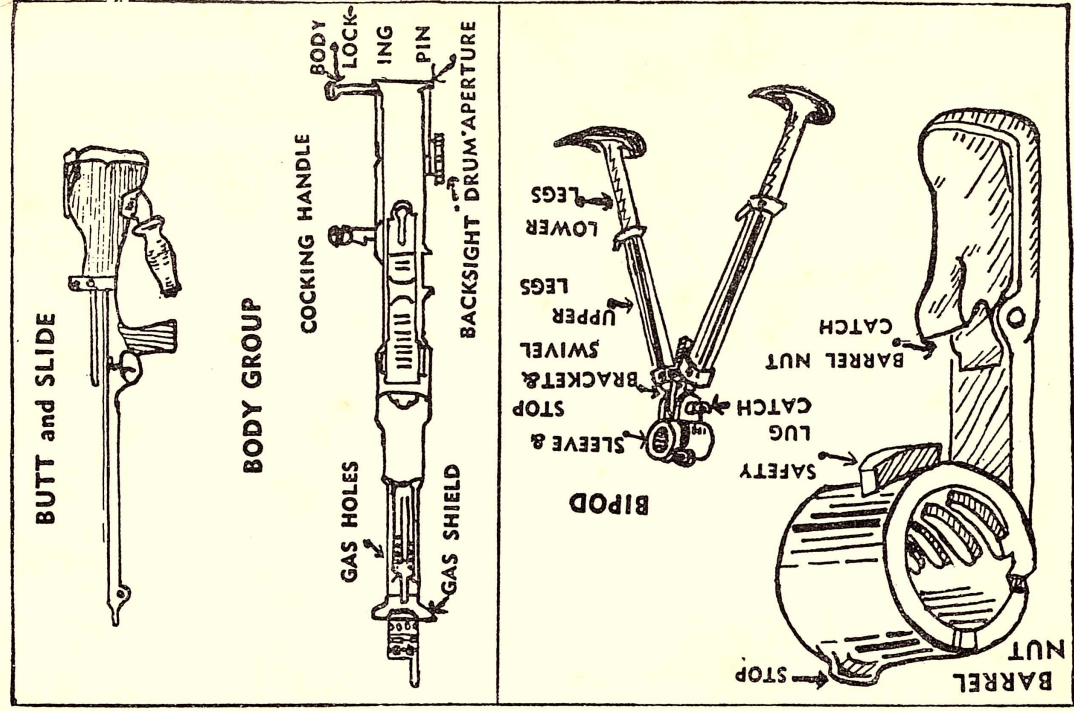
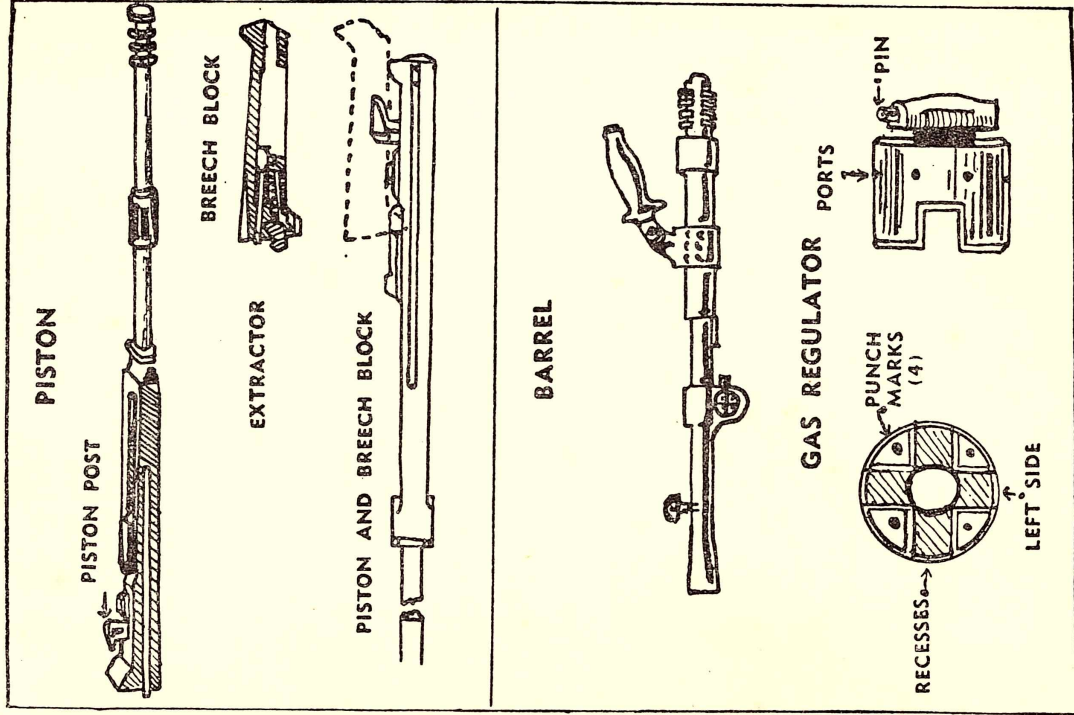
Stoppages—

- (B) Insufficient gas pressure. (No. 3 Hole normally to be used.)
- (C) Mechanical irregularity or breakdown.
- (D) Portion of empty case separated.

NOTE—If the gun is properly adjusted and the gas pressure of correct balance, stoppages other than those caused by an empty magazine should be rare. Trouble will occur with magazines unless they are properly cared for and correctly filled.

BREN DETAILS

Composite name from Brno (Czecho-Slovakia) and Enfield (England).
Weight of gun, with bipod: 23 lbs.
Barrel: 6 lbs.
Magazine, filled (30 rounds): 2½ lbs.
Tripod, complete: 30 lbs.
Rate of fire, automatic bursts: Up to 120 rounds per minute.
Rate of fire, single rounds: Up to 30 rounds per minute.



NORMAL STRIPPING — BREN GUN

Magazine removed

Cock the gun and press the trigger } Safety

Push out Body Locking Pin to right and slide the butt back.

Draw the cocking handle back and push it forward again—this will draw Piston, etc., to rear.

Hold Return Spring Rod gently to left—draw out the Piston and Breech Block, lift latter off.

Turn gun to right until it rests on the Stop on the Sleeve of the Bipod.

Disengage Barrel Nut Catch and rotate the Nut fully to the right.

Grasp the Carrying Handle, turn it upwards, push forward—barrel will disengage from Nut.

Push Retainer Pin level with opening in Gas Regulator, turn it and remove Regulator.

Hold the backsight drum with one hand and slide off the Butt, etc.

Close the Magazine Opening Cover.

Press down the Barrel Nut Retainer Plunger and take out the Barrel Nut.

Turn the Body upwards and remove it from the Bipod Sleeve.

Replace in reverse order. Position Barrel Nut with Catch downwards—tap in position with hand. When replacing the barrel, the Handle is vertically above the barrel, the Barrel Nut rotated and the recesses in the Gas Regulator are in line with the projecting Cylinder Locking Bar.

To Strip the Butt Plate, etc.

Turn the Butt strap to the rear—it has to be pulled upwards slightly to unlock. Place the point of a round on the Catch of the Butt Plate close to the Butt Plate and tap the base of the round. Take off the Butt Plate.

Engage the cap of the Return Spring with the combination tool, press it in, turn a quarter turn to the left and gently take out the Return Spring and Rod.

To Assemble the Above

Place in the Rod and Return Spring. Place the combination tool over the cap. Compress the Spring and guide it carefully into position. Press in cap and turn right to lock. Fit the stud of the Butt Plate in the recess in the toe of the Butt. Lift the Butt Strap upwards and forwards firmly pressing in the catch, using the other hand.

To Strip the Firing Pin

Push out the Retainer Pin carefully so that the Firing Pin does not fly out to the rear.

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